

He supports this theory as follows:—In the first place he starts from the truth, ascertained by the experience of breeders, that a certain degree of difference between the parent individualities is most favourable to the result of a crossing. Such differences which are caused in the organism by the external conditions of life would evidently be of no service in asexual reproduction. A disease which made its appearance in an individual which propagated solely by the method of gemmation would be inherited from generation to generation and endanger the existence of the entire species. But if a mingling of the diseased with perfectly healthy protoplasm (such as must necessarily occur in sexual reproduction) be brought about, we have not merely the possibility, but even the highest probability, of a rectification such as can be obtained in no other way. It is, in Hatschek's opinion, in furnishing the opportunity for such rectification that we must find the chief use of the existence of sexually differentiated individuals among animals and plants.—*Prager mediz. Wochenschrift*, No. 46, 1887; *Biologisches Centralblatt*, No. 21, January 1, 1888, pp. 654–666.

*Notice of two new Branchiopod Crustacea from the Trans-Caspian Region.* By Dr. ALFRED WALTER.

The species described are as follows:—

1. *Apus Haeckelii*, n. sp.

*A. lamina caudali coniformi, acuminata, incarinata neque spinulosa, duplo longiore quam lata. Sinu postico scuti angulato armatoque dentibus 30. Ramo longissimo primi pedis angulos scuti excedente. Segmentis posterioribus 16–17 scuto non obtectis, postremis 6 apodibus. Colore scuti et corporis in vivo albido flavescente, pedum rosaceo.*

*Hab.* In a desert spring near Karadschatatyr, north of the Lower Atrek, in the Russian Trans-Caspian.

A female was taken early in May, together with species of *Estheria*, *Branchipus*, and some Cladocera and Ostracoda. The species belongs to Grube's second group of *Apus*, in which there is a caudal lamina separating the long caudal appendages (with *A. productus*, *A. glacialis*, &c.). It differs from all known allied species in the unkeeled and spineless caudal lamina.

2. *Artemia asiatica*, n. sp.

*A. processibus caudalibus digitiformibus, setas 8–10 gerentibus, antennis primis gracilibus filiformibus, apice setis 3 armatis. Antennis secundis erassis, corniformibus, apice acuminatis, duobus tuberibus non dense setosis ad radicem eminentibus.*

*Hab.* In a salt-spring between Bend-i-nadyr and the well of Agamet, in the mountain-desert east of Murgab, near the Afghan boundary.

Female, taken in April 1887. Colour of the living animal tile-red.—*Bull. Soc. Imp. Nat. de Moscou*, nouv. sér., tome i. (1887), pp. 924–927.